Applicant: Desai, et. al. Filed: May 16, 2000

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PATENT
Attorney Docket No.: VPHAR1460-2
(ABI1460-2/071243-1301)

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- 29. A method for the administration of a taxane to a subject in need thereof, said method comprising systemically administering said taxane to said subject in a formulation that may be safely administered using medical hardware made from materials containing extractable components.
- 31. A method for the administration of a taxane to a subject in need thereof, said method comprising systemically administering said taxane to said subject in a formulation that may be safely administered without the use of an in-line filter.

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32. A method for the administration of a taxane to a subject in need thereof, said method comprising systemically administering a complete dose of said taxane to said subject in a volume of less than 250 ml.

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- 35. A method for the administration of a taxane to a human subject in need thereof, said method comprising systemically administering said taxane to said subject at a rate between 6-30 mg/m²/min over an administration period of one hour or less.
- 46. A dry powder formulation suitable for administration of a taxane to a human subject in need thereof upon reconstitution, wherein said formulation comprises taxane nanoparticles having a mean particle size in the range of about 10 nm up to about 8 μm, wherein said formulation is substantially free of surfactant.

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- 47. A formulation according to claim 46 wherein said formulation is lyophilized.
- 48. A frozen formulation of a taxane suitable for administration of a taxane to a subject in need thereof upon thawing.

PATENT

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A liquid formulation of a taxane suitable for administration to a human subject, 49. said formulation comprising water and a taxane at a concentration of at least 2.0 mg/ml, wherein said formulation is stable for at least 3 days.

- A liquid formulation of a taxane according to claim 49, wherein said taxane 50. concentration is at least 5.0 mg/ml.
- A liquid formulation of a taxane according to claim 49, wherein said taxane 51. concentration is at least 10.0 mg/ml.
- A drug formulation suitable for administration of drug to a subject in need thereof 52. by inhalation or oral administration, said formulation comprising at least one protein and drug nanoparticles having a size of about 10-1,000 nm, plus optionally an excipient.
- A dry powder formulation of a taxane suitable for administration of a taxane to a 66. subject in need thereof upon reconstitution, wherein said formulation is substantially free of surfactants.

- A dry powder formulation of a taxane suitable for administration of a taxane to a 67. subject in need thereof upon reconstitution, wherein said formulation is substantially free of cremophor.
- A formulation of a takane suitable for administration of a taxane to a subject in 68. need thereof, wherein said formulation comprises taxane nanoparticles having an average diameter in the range of about 10 nm up to about 8 µm.
- A formulation according to claim 68, wherein said taxane nanoparticles are 69. suitable for administration to a subject by oral, topical, ocular, intramuscular, intravenous, intraperitoneal, intraarterial, intraurethral, intrathecal, or inhalation administration.

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A lyophilized formulation suitable for administration of a taxane to a subject upon 70. reconstitution, wherein said formulation comprises taxane nanoparticles whose size remains substantially constant prior to and after reconstitution.

An article of manufacture comprising a sealed vial containing a dry powder ·71. formulation of a taxane, wherein said formulation comprises taxane nanoparticles having an average diameter in the range of about 10 nm up to about 8 μ m.

An article of manufacture according to claim 74, wherein said formulation is stable for at least 3 plays.

An article of manufacture comprising a dry powder or liquid formulation of drug 73. and at least one protein, wherein said formulation comprises drug nanoparticles that have been filtered through a sterilizing filter.

An article of manufacture according to claim 73 wherein said drug is a taxane. 74.

article of manufacture according to claim 73 wherein said liquid formulation 75. of taxane is free of surfactants

- The method of claim 35 wherein said rate is between 6-16 mg/m²/min. 76.
- The method of claim 35 wherein said taxane is used to treat cancer in said human 77. subject.
- The method of claim 35 wherein said taxane is used to treat vascular restenosis in 78. said human subject.

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The composition of claim 46 wherein said nonoparticles have a mean particle size 79. I in the range of about 20 nm up to about 400 nm.

- The composition of claim 46 wherein said dry powder formulation of taxane is 80. suitable for the treatment of tumors in the brain or peritoneal cavity.
- A liquid formulation of a taxane according to claim 49, wherein said taxane 81. concentration is at least 20 mg/ml.
- A method for the administration of a taxane to a human subject in need thereof, said method comprising systemically administering said taxane to said subject at a concentration of at least 2 mg/ml.
- The method of claim 82 wherein said concentration of said taxane is at least 5 83. mg/ml.
- The method of claim 82 wherein said concentration of said taxane is at least 10 84. mg/ml.
- The method of claim 82 wherein said concentration of said taxane is at least 20 85. mg/ml.
- A drug formulation according to claim 52 wherein said drug nanoparticles are 86. contained within protein microparticles having a size of about 1-10 µm.
- The formulation of claim 52 wherein said drug formulation may be used in 87. conjunction with oral bioavailability enhancers.